

Exploring Agricultural Sciences

Course Description: Exploring Agricultural Sciences analyzes the different aspects of the agricultural industry. Most people have a limited understanding of the importance of the agricultural, food, fiber, and natural resources industry.

Recommended Prerequisite: None

Recommended Credit: 1

Recommended Grade Level: 8

Course Codes: A10 – **5135** or A12 – **5185****

*Marked areas to be taught in 6-9 week rotation.

**Use A12 Course Code number for all programs. A-10 should be used for 10 month programs only.

Exploring Agricultural Sciences

Standard 1.0

Demonstrate the importance of agriculture in daily life.

Standard 2.0

Demonstrate an understanding of the area of agribusiness.

Standard 3.0

Demonstrate an understanding of the area of agricultural mechanics.

Standard 4.0

Demonstrate an understanding of the area of animal science.

Standard 5.0

Demonstrate an understanding of the area of natural resource management.

Standard 6.0

Demonstrate an understanding of the area of horticulture.

Standard 7.0

Demonstrate an understanding of the FFA in American agriculture.

Exploring Agricultural Sciences

Course Description: This course is designed to give a general introduction to the agricultural, food, fiber, and natural resource industry. Students will evaluate the importance of agriculture in daily life, agribusiness, agricultural mechanics, animal science, natural resources, and horticulture.

Standard 1.0

Demonstrate the importance of agriculture in daily life.

Learning Expectations and Performance Indicators:

- 1.1 Describe and explain the impact of agriculture on daily life.*
- 1.2 Pass a safety test at 100% accuracy on all lab equipment.*
- 1.3 Describe and demonstrate safe operation of agricultural lab equipment.*
- 1.4 Identify the sources of different types of food.*
- 1.5 Specify and explain the role of agriculture in the formation of the United States.
- 1.6 Specify and explain the changes in agriculture over the last 200 years.

Standard 2.0

Demonstrate an understanding of the area of agribusiness.

Learning Expectations and Performance Indicators:

- 2.1 Identify careers and explain their role in agribusiness.*
- 2.2 Describe and explain the role of leadership in agribusiness.
- 2.3 Describe the importance of group dynamics in agribusiness
- 2.4 Explain the role of the different types of agribusiness in society.*
- 2.5 Demonstrate recordkeeping practices in agribusiness.
- 2.6 Identify different methods of communication.

Standard 3.0

Demonstrate an understanding of the area of agricultural mechanics.

Learning Expectations and Performance Indicators:

- 3.1 Identify and explain the careers in agricultural mechanics.*
- 3.2 Specify and explain the mechanical skills used in agriculture.
- 3.3 Define and explain importance of horsepower in agriculture.
- 3.4 Identify and explain the different power units used in agriculture.
- 3.5 Identify and explain the function of basic hand tools.
- 3.6 Identify and explain the function and safe use of power tools.
- 3.7 Specify and explain building methods used in agriculture.
- 3.8 Complete safety test with 100 percent accuracy.
- 3.9 Based on data collected from measurements, calculate acreage, length, and volumes.

Standard 4.0

Demonstrate an understanding of the area of animal science.

Learning Expectations and Performance Indicators:

- 4.1 Identify and explain careers in animal science.*
- 4.2 Identify and explain the role of large animals in agriculture.
- 4.3 Identify and explain the species of small and companion animals.
- 4.4 Identify and explain the function of exotic animal species.
- 4.5 Specify and explain the importance and impact of animal health.

Standard 5.0

Demonstrate an understanding of the area of natural resource management.

Learning Expectations and Performance Indicators:

- 5.1 Identify and explain the careers in natural resources.*
- 5.2 Identify and explain the function of wildlife species in Tennessee.
- 5.3 Identify and explain the functions of plant parts.
- 5.4 Diagram and explain the interrelationship between animals and plants.
- 5.5 Identify and explain the methods of soil conservation.
- 5.6 Specify and explain the types of pollution found in water.
- 5.7 Explain and specify the types of air pollution.

Standard 6.0

Demonstrate an understanding of the area of horticulture.

Learning Expectations and Performance Indicators:

- 6.1 Identify and explain the careers in horticulture.*
- 6.2 Identify different plants used in greenhouses and landscaping.
- 6.3 Identify and explain the types of turfgrass.
- 6.4 Describe the role of aquaculture in society.
- 6.5 Describe the role of hydroponics in society.

Standard 7.0

Demonstrate an understanding of the FFA in American agriculture.

Learning Expectations and Performance Indicators:

- 7.1 Explain the history of the FFA.
- 7.2 Explain the benefits of the FFA.*
- 7.3 Describe examples of Career Development Event activities in the FFA.*
- 7.4 Describe examples of a Supervised Agricultural Experience Program.*
- 7.5 Select a Supervised Agricultural Experience Program based on career goals and industry needs for each individual.*